Title (en)
ARITHMETIC OPERATIONS IN A DATA PROCESSING SYSTEM

Title (de)
ARITHMETISCHE OPERATIONEN IN EINEM DATENVERARBEITUNGSANLAGE

Title (fr)
OPERATIONS ARITHMETIQUES DANS UN SYSTEME DE TRAITEMENT DE DONNEES

Publication
EP 1137980 A1 20011004 (EN)

Application
EP 99923761 A 19990526

Priority
- GB 9901653 W 19990526
- GB 9825543 A 19981120
- US 19621398 A 19981120

Abstract (en)
[origin: GB2343970A] A data processing system is provided for supporting saturating arithmetic using input operands of the Q31 and Q15 type. In order to accommodate this type of operation applied to multiply accumulate or multiply subtract instructions, additional instructions QDADD, QDSUB and QDRSB are provided. QDADD provides the function of double/saturate/add/saturate. QDSUB and QDRSB provide respective operand orderings of double/saturate/subtract/saturate operations. Providing these special purpose instructions within the instruction set allows the required saturation and adjustments to be provided for Q31 and Q15 operands whilst not imposing additional delays and complication onto the main data paths required for the rest of the processing operations.

IPC 1-7
G06F 7/544

IPC 8 full level
G06F 7/544 (2006.01)

CPC (source: EP US)
G06F 7/5443 (2013.01 - EP US); G06F 7/49921 (2013.01 - EP US); G06F 7/49936 (2013.01 - EP US); G06F 2207/3812 (2013.01 - EP US)

Citation (search report)
See references of WO 0031621A1

Designated contracting state (EPC)
DE FR GB IT NL

DOCDB simple family (publication)
GB 2343970 A 20000524; **GB 9825543 D0 19990113**; CN 1218240 C 20050907; CN 1326565 A 20011212; EP 1137980 A1 20011004; EP 1137980 B1 20020904; TW 428142 B 20010401; US 6314443 B1 20011106; WO 0031621 A1 20000602

DOCDB simple family (application)
GB 9825543 A 19981120; CN 99813521 A 19990526; EP 99923761 A 19990526; GB 9901653 W 19990526; TW 87119512 A 19981124; US 19621398 A 19981120